



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,994	08/23/2001	Richard E. Smalley	11321-P035US	1539
47744	7590	02/24/2005	EXAMINER	
ROSS SPENCER GARSSON WINSTEAD SECHREST & MINICK P.C. P. O. BOX 50784 DALLAS, TX 75201			KOPEC, MARK T	
			ART UNIT	PAPER NUMBER
			1751	

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/935,994

Applicant(s)

SMALLEY ET AL.

Examiner

Mark Kopec

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-6,8-13,15-18,20-30,35-46 and 51-67 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8-13,15-18,20-30,35-46 and 51-67 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1751

This action is responsive to applicant's amendment filed 11/16/04. Claims 1, 3-6, 8-13, 15-18, 20-30, 35-46 and 51-67 are currently pending.

Applicant's election of Group I in the reply filed on 11/16/04 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The obviousness-type double patenting as being unpatentable over claims 24-65 of copending Application No. 09/935995 is withdrawn. The terminal disclaimer filed 11/16/04 is entered.

Claims 1, 3-6, 8-13, 15-18 and 20-30, 35-38, 40-42, 44-46 and 51-67 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kuper 6,749,712 (published patent of pre-grant 2002/0092613).

This rejection is maintained for the reasons set forth in the Rejection mailed 5/20/04. However, note that the following language has been removed from the rejection:

For purposes of this disclosure, "chemical treatment" or "chemically treated" can include functionalization, (covalent attachment of organic functional groups), adherence of a surfactant molecule or wrapping of a polymer around the body of the tube. The sol gel

Art Unit: 1751

process, as defined in this patent will include a sol of chemically treated SWNTs using the definition of definition of chemical treatment above (page 3, para 0027).

The statement is merely a recital of a property inherent in the disclosed process/compositions.

Applicant's arguments filed 11/16/04 have been fully considered but they are not persuasive.

As stated above, the added language (not present in provisional application 60/227,184) is a description of properties inherent in the disclosed process/compositions. The provisional application contains the full disclosure necessary to anticipate/render obvious the instant claims. The reference is therefore entitled to the filing date of 60/227,184 (8/23/00).

Claims 24-30, 35-38, 40-42, 44-46 and 51-67 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bower et al (6,630,772).

This rejection is maintained for the reasons set forth in the Rejection mailed 5/20/04.

Applicant's arguments filed 11/16/04 have been fully considered but they are not persuasive.

With respect to each of independent claims 24, 27, 35, 36, 40 and 44, applicant argues that Bower does not disclose or

Art Unit: 1751

suggest the "...change dimensionally or electronically" or "...whereby the viscosity of the fluid is capable of being controlled by application of a field selected from the group consisting of electric field or magnetic field" features recited in these claims. Applicant contends that "mere melting of a polymer in the presence of nanotubes would not result in 'polymer wrapping' around the nanotube aggregates.

The examiner respectfully maintains, for the reasons of record, that Bower inherently meets each of the claimed limitations. Specifically, the reference teaches:

It is also possible to form an adherent nanotube film by techniques such as mixing pre-formed nanotubes with solvent and binder, and optionally solder, and depositing the mixture onto a substrate. Subsequent heating will activate the binder and/or melt the solder to anchor the nanotubes to the substrate.

Claims 24-30, 35-38, 40-42, 44-46 and 51-67 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Davey et al (6,576,341).

This rejection is maintained for the reasons set forth in the Rejection mailed 5/20/04.

Applicant's arguments filed 11/16/04 have been fully considered but they are not persuasive.

Note that this rejection has been withdrawn over claims 1, 3-6, 8-13, 15-18 and 20-23. The examiner agrees that Davey does

Art Unit: 1751

not disclose or suggest the "dielectric" materials of these claims.

With respect to the remaining claims, applicant argues that Davey does not disclose or suggest the "...change dimensionally or electronically" or "...whereby the viscosity of the fluid is capable of being controlled by application of a field selected from the group consisting of electric field or magnetic field" features recited in these claims. Applicant contends, "Mere melting of a polymer in the presence of nanotubes would not result in 'polymer wrapping' around the nanotube aggregates.

The examiner respectfully maintains, for the reasons of record, that Davey inherently meets each of the claimed limitations. The reference specifically teaches "coiling structure of organic material wrapped around the nanotubes" (Col 3, lines 1-10). It appears through a careful reading of the instant specification that such structure(s) result in the properties instantly claimed (claims 24-30, 35-38, 40-42, 44-46 and 51-67).

In view of the foregoing, the above claims have failed to patentably distinguish over the applied art.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1751

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Kopec whose telephone number is (571) 272-1319. The examiner can normally be reached on Monday - Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1751

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Mark Kopec  
Primary Examiner  
Art Unit 1751

MK

February 22, 2005